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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/521,594

01/18/2005

Tsutomu Iwasaki

HEI-004

8802

32628

7590

05/30/2008

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EXAMINER

LEE, EDMUND H

ART UNIT

PAPER NUMBER

1791

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DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/521,594	<b>Applicant(s)</b> IWASAKI ET AL.	
	<b>Examiner</b> EDMUND H. LEE	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,5,9,11-15 and 37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5,7,9 and 11-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3, 5 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Coffman (USPN 4563325). Coffman teaches the claimed process as evidenced at col 6, lns 10-25 and 38-57; and figs 1-7.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7, 9, and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coffman (USPN 4563325). The above teachings of Coffman are incorporated hereinafter. In regard to applying a lubricant to the flange portion (cls 7 and 9), such is well-known in the plug-assist art in order to facilitate movement of the preform. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply lubricant to the flange portion of the flange of Kato et al in order to facilitate its movement during the forming steps. In regard to characteristics of the vessel (cls 13 and 14), such are mere obvious matter of choice dependent on the desired final product and of little patentable consequence to the claimed process since it

is not a manipulative feature or step of the claimed process. Further, the claimed characteristics are well-known in the container art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form a vessel having the claimed characteristics in order to form a highly desirable vessel.

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Coffman (USPN 4563325) as applied to claim 1 and further in view of Hrivnak et al (USPN 4388356). The above teachings of Coffman are incorporated hereinafter. Coffman teaches pneumatically forming the thermoplastic sheet into a shape of the lower mold; fixing the sheet; and cooling the article (col 6, lns 10-25). Coffman, however, does not teach forming into a heated lower mold, thermally fixing the sheet, and then decompressing the inside of the formed article to contract the formed article into the shape of the plug. Hrivnak et al teach a plug-assist thermoforming process, wherein a thermoplastic sheet is pneumatically formed into a formed article by a plug and a lower mold heated at a temperature not less than a crystallization temperature of the sheet; thermally fixing the sheet; and then decompressing an inside of the formed article to contract the article into a shape of the plug; and cooling the article (col 3, lns 10-30; col 5, lns 8-15; col 5, ln 43-col 6, ln 3; col 6, lns 48-61). Coffman and Hrivnak et al are combinable because they are analogous with respect to plug-assist thermoforming. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the pneumatic forming and decompressing steps of Hrivnak et al into the process of Coffman in order to facilitate removal of the article and to impart further orienting to the article.

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Coffman (USPN 4563325) in view of Hrivnak et al (USPN 4388356). Coffman teaches all of the claimed limitation (col 6, Ins 10-25 and 38-57; and figs 1-7) except forming into a heated lower mold, thermally fixing the sheet, and then decompressing the inside of the formed article to contract the formed article into the shape of the plug. Coffman also teaches pneumatically forming the thermoplastic sheet into a shape of the lower mold; fixing the sheet; and cooling the article (col 6, Ins 10-25). Hrivnak et al teach a plug-assist thermoforming process, wherein a thermoplastic sheet is pneumatically formed into a formed article by a plug and a lower mold heated at a temperature not less than a crystallization temperature of the sheet; thermally fixing the sheet; and then decompressing an inside of the formed article to contract the article into a shape of the plug; and cooling the article (col 3, Ins 10-30; col 5, Ins 8-15; col 5, In 43-col 6, In 3; col 6, Ins 48-61). Coffman and Hrivnak et al are combinable because they are analogous with respect to plug-assist thermoforming. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the pneumatic forming and decompressing steps of Hrivnak et al into the process of Coffman in order to facilitate removal of the article and to impart further orienting to the article.

7. Applicant's arguments with respect to claims 1,3,5,7,9, and 11-15 have been considered but are moot in view of the new ground(s) of rejection.

8. The following references teach the state of the art: 4239727, and 3342914.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ayres et al (USPN 3739052) teach using a lubricated blank in a plug-assist molding process. The following US patents teach the state of the art: 4563325, 5641524, 5198175, 5188787, 4883633, 4668175, 4563325, 4239727, 2973558, 2990581, and 3342914.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDMUND H. LEE whose telephone number is 571.272.1204. The examiner can normally be reached on MONDAY-THURSDAY FROM 9AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571.272.1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EDMUND H. LEE  
Primary Examiner  
Art Unit 1791

EHL

/EDMUND H. LEE/

Primary Examiner, Art Unit 1791